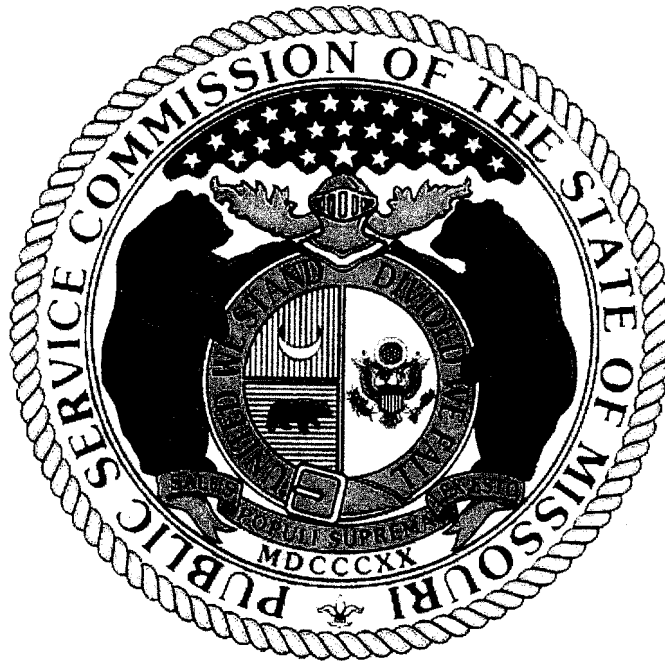


# Missouri Public Service Commission

## Electric Roundtable Discussion Group Record of Proceedings



## Properly Structured Incentive Plans

December 17, 2001  
Capitol Plaza Hotel &  
Convention Center  
Jefferson City, Missouri



Commissioners  
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Chair  
**CONNIE MURRAY**  
**SHEILA LUMPE**  
**STEVE GAW**  
**BRYAN FORBIS**

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Director, Administration  
**DALE HARDY ROBERTS**  
Secretary/Chief Regulatory Law Judge  
**DANA K. JOYCE**  
General Counsel

## MEMORANDUM

TO: Electric Roundtable Discussion Group

FROM: Warren Wood

SUBJECT: Record of Proceedings

DATE: December 21, 2001

Thank you for attending the Commission's Electric Roundtable session on Properly Structured Incentive Plans held in Jefferson City, Missouri on December 17, 2001. As promised, please find attached a bound compilation of the materials presented.

Our desire is to make these meetings as informative, beneficial, and effective as possible. Any ideas or suggestions you may have to help us toward that end are always appreciated. Feel free to contact me at (573) 751-2978 or e-mail me at [wtwood@mail.state.mo.us](mailto:wtwood@mail.state.mo.us) with any comments. We look forward to your attendance and active participation at future roundtable meetings.

Attachment

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5. Responses of Panelists to Keynote Presentation & Thoughts on Properly Structured Incentive Plan Objectives, Structures, and Pitfalls
  - a. Chris Giles, Senior Director Risk Management & Regulatory Affairs, Kansas City Power & Light
  - b. Warner Baxter (w/Dr. Dennis Weisman, KSU Economics Professor), Senior Vice President - Finance, Ameren Corporation
  - c. Dr. Michael Proctor, Chief Economist, Missouri Public Service Commission Staff
  - d. Ryan Kind, Chief Economist, Office of the Public Counsel
6. Attendance List

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# Properly Structured Incentive Plans

## Electric Roundtable Discussion Group

Monday, December 17th, 2001 - 1:00 to 4:30 PM

Capitol Plaza Hotel & Convention Center - Jefferson A Room  
Jefferson City, MO

12:30 Registration

1:00 Opening Remarks & Introductions  
Mark Oligschlaeger, Regulatory Auditor V, Missouri Public  
Service Commission Staff

1:15 Presentations by Panelists  
The following panelist will provide their perspectives on objectives,  
structures, and pitfalls of incentive plans:

Kenneth Rose, Ph.D., Senior Institute Economist, National Regulatory  
Research Institute

Chris Giles, Senior Director Risk Management & Regulatory Affairs,  
Kansas City Power & Light

Warner Baxter (w/Dr. Dennis Weisman, KSU Economics Professor), Senior  
Vice President - Finance, Ameren Corporation

Mike Proctor, Chief Economist, Missouri Public Service Commission Staff

Ryan Kind, Chief Economist, Office of the Public Counsel

3:00 Break

3:15 Open Discussion/Question Period for All Participants

*Should a docket be opened to address electric utility incentive plans?*

*What are the likely objectives/goals of an incentive plan?*

*What are the likely internal mechanics of an incentive plan?*

*What kind of incentive plans do we see in the electric industry?*

*What kind of outcomes should we be wary of?*

*What are the next steps toward implementation?*

4:20 Closing Remarks

4:30 Adjourn

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## **Mark Oligsehlaeger**

Mark is an Auditor V with the Missouri Public Service Commission's Accounting Staff in the Utility Services Division.

Mark graduated from Rockhurst College in 1981, and has been employed at the Commission since September 1981. He has filed testimony in numerous electric, gas, water, telecommunications, and industrial steam proceedings; including rate cases, earnings complaint cases, merger and acquisition applications, accounting authority orders and other types of cases. He has also filed testimony on alternative regulation/incentive sharing plan topics for electric and gas utilities. Mark was a member of the Stranded Cost Working Group within the Missouri Commission's Retail Electric Competition Task Force in the late 1990s.

## - DENNIS L. WEISMAN

Dr. Weisman is currently a Professor of Economics at Kansas State University and a member of the graduate faculty. As former Director of Strategic Marketing for SBC Communications, Inc., and a research fellow with the Public Utility Research Center at the University of Florida, Dr. Weisman has over 20 years of experience in the areas of regulation and business strategy development. He has testified in numerous regulatory proceedings to the economic and social impacts of regulatory policies and has served as an advisor to telecommunications firms, electric power companies and regulatory commissions on economic pricing principles, the design of incentive regulation plans, and competition policies. His primary research interests are in strategic behavior and government regulation.

The author or co-author of more than 60 articles, books and book chapters, Dr. Weisman's work has appeared in the *Antitrust Bulletin*, *Economics Letters*, the *Journal of Regulatory Economics*, the *Yale Journal on Regulation*, *The Journal of Policy Analysis and Management*, and the *Federal Communications Law Journal*. He is the co-author of Designing Incentive Regulation For The Telecommunications Industry, published by the MIT Press and the AEI Press in 1996, and The Telecommunications Act of 1996: The "Costs" of Managed Competition, published by Kluwer in 2000. He also serves on the editorial boards of the *Journal of Regulatory Economics* and *Information Economics and Policy*.

Dr. Weisman earned his Ph.D. in economics from the University of Florida in 1993.



## WARNER L. ]BAXTER

**Warner Baxter is the Senior Vice President, Finance, of Ameren Corporation. In his role as Chief Financial Officer of Ameren, Mr. Baxter oversees the accounting and regulatory functions of Ameren, as well as the treasury, tax, risk management, internal audit and budget and corporate modeling functions of the Company. Over the last six years, Mr. Baxter has played an integral role in the development and administration of AmerenUE's alternative rate regulation plan. He has testified before the Missouri Public Service Commission on matters associated Aith this plan.**

**Prior to joining Ameren in 1995, Mr. Baxter was employed by PricewaterhouseCoopers LLP (PWC) as a senior manager. At PWC, Mr. Baxter worked extensively on accounting, reporting and operating matters related to the public utility industry. Mr. Baxter graduated from the University of Missouri, St. Louis with honors in business. He is also a certified public accountant and a member of the American Institute of Certified Public Accountants and the Missouri Society of Certified Public Accountants.**

## Biography

Kenneth Rose, Ph.D. is a Senior Institute Economist at The National Regulatory Research Institute at Ohio State University. Dr. Rose has been working on energy and regulatory issues for more than seventeen years. He has testified or presented at many legislative and public utility commission hearings, proceedings, conferences, and workshops on electric industry issues and has testified before several committees of the U.S. House of Representatives on regulatory matters. Dr. Rose has worked primarily on studies concerning the electric industry and has directed or contributed to many reports, papers, articles, and books. Topics include Clean Air Act implementation, environmental externalities of electricity production, competitive bidding for power supply, regulatory treatment of uneconomic costs, market power and market monitoring, and other industry restructuring issues. He is a frequent presenter at conferences, workshops, and other instructional venues. Dr. Rose is an frequent lecturer for the School of Public Policy and Management at Ohio State University. Prior to joining NRRI, Dr. Rose worked on many energy related issues at Argonne National Laboratory from 1984 to 1989. Dr. Rose received his B.S. (1981), M.A. (1983), and Ph.D. (1988) in Economics from the University of Illinois at Chicago.

## Chris Giles

Chris Giles, Senior Director Regulatory, Risk Management, Business Planning  
Kansas City Power & Light Company

Employed by KCPL since 1975. Has held various positions in the Company, including Director of Regulatory Affairs and Director of Marketing. In his current position is responsible for Business Planning and Risk Management for KCPL's Delivery Business, and Regulatory Affairs for the Utility.

Chris received a Bachelors Degree in Economics and Masters Degree Business Administration, with concentrations in Accounting and Quantitative Analysis.

Chris served on the Missouri Commission's Retail Competition Task Force, The Kansas Legislature's task force on Retail Wheeling and has testified before both the Missouri and Kansas Commissions and Legislatures regarding a variety of utility issues.

## MICHAEL S. PROCTOR

Mike has a BA and MA in Economics from the Univ. of MO and a PhD in Economics from Texas A&M. Mike is a Chief Regulatory Economist with the Missouri Public Service Commission and has extensive experience in the following areas:

- ENERGY RESTRUCTURING
  - ℥ Staff Vice-Chairman: Market Structure, Market Power Working Group - Commission's Task Force on Retail Competition.
  - ℥ Testified on proposed retail electric choice legislation before the Missouri Joint Committee on Telecommunications and Energy.
  - ℥ Review proposals submitted by electric utilities for proposed restructuring (e.g., transfers of utility assets to holding company).
- REGIONAL TRANSMISSION
  - ∇ Help write federal pleadings for the Missouri Commission.
  - ∇ Serve as regulatory representative on both the Regional Tariff Working Group and the Commercial Practices Committee of the Southwest Power Pool.
  - ℥ Represent the Missouri Commission in RTO matters at stakeholder meetings of the Southwest Power Pool, Midwest ISO and Alliance.
- MARKET POWER
  - ℥ Staff's witness on market power related to proposed mergers.
    - Western - Kansas City Power & Light
    - American Electric Power- Central & Southwest
    - UtiliCorp - St. Joseph Light & Power - Empire District Electric
  - ℥ Lead in developing Staff team capability to perform analysis of regional electricity markets using consultant-developed models.

Mike worked as an Assistant Professor of Economics and Management at Purdue University (1970 -1973), an Assistant Professor of Economics at the University of Missouri (1973 -1977), and has had the following responsibilities at the Missouri Public Service Commission since 1977:

- Senior Research Economist - Research & Planning Department
  - Load Research Analysis
  - Class Cost of Service & Rate Design
  - Capacity Expansion Planning
- Manager of Research & Planning Department
  - Managed a Staff that grew to be ten analyst
- Manager of Research & Analysis
  - Research & Planning Department
  - Financial Analysis Department
  - Management Services Department
- Manager of Economic Analysis
  - Headed up the team that wrote and implemented the Missouri Commission's Electric Resource Planning Rules
  - Headed up teams for both electric and natural gas rate design
- Chief Regulatory Economist
  - Shifted focus from state case oriented issues to state, regional and federal restructuring issues
- 1997 - 2000: Research Advisory Board for the National Regulatory Research Institute.
- 1995 - 2000 Research Advisory Board for the Financial Research Institute, University of Missouri.

## **Ryan Kind**

Ryan Kind is the Chief Energy Economist for the Missouri Office of the Public Counsel. He has been with the Public Counsel's office since 1991 and works primarily on gas and electric utility issues. Ryan's work at the Public Counsel's office has included testimony before the Missouri PSC, the Missouri Legislature, and the Federal Energy Regulatory Commission (FERC). He has testified on a wide range of energy issues including: transmission access and reliability issues, ISO and RTO formation issues, market power, supply and demand-side resource planning, class cost of service and rate design, and incentive regulation.

Ryan Kind was the public consumer organizations representative on the Midwest ISO's Advisory Committee for two years. Currently, Ryan serves on the DNR's Weatherization Policy Advisory Council and on the Operating Committee of the North American Electric Reliability Council (NERC). He has both a master's degree and a bachelor's degree in economics from the University of Missouri-Columbia.

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OPENING REMARKS  
MISSOURI PUBLIC SERVICE COMMISSION  
PROPERLY STRUCTURED INCENTIVE PLANS  
ELECTRIC ROUNDTABLE DISCUSSION GROUP  
DECEMBER 17, 2001

Good afternoon and thank you for coming to this Electric Roundtable on Properly Structured Incentive Plans. The changes in the electric industry experienced in recent years and the changes that may still occur in the future certainly make this topic a very timely and important one. Fundamentally, the question before us today is whether the traditional ways of setting rates and regulating electric utilities in Missouri needs to change now because of these external changes to the electric industry or for other reasons and, if so, how regulation should in fact change. A key *follow-up* question is whether any such changes can be implemented in a way that is beneficial, or at least not detrimental, to all of the stakeholder groups of the electric industry, most particularly electric consumers and electric utility shareholders. To discuss these questions, we are privileged today to have a nationally known and respected keynote speaker, Dr. Kenneth Rose of the National Regulatory Research Institute. As shown in the agenda, we will *follow* the presentation by Dr. Rose by further presentations on this topic by a distinguished panel of individuals with varied backgrounds and a great deal of experience in Missouri regulatory matters. Our Missouri panelists for today's discussion are:

Mr. Chris Giles; Senior Director Risk Management & Regulatory Affairs, Kansas City Power & Light Company

Mr. Warner Baxter; Senior Vice President - Finance, Ameren Corporation (Mr. Baxter will share his presentation time with Dr. Dennis Weisman, a Professor of Economics at Kansas State University)

Dr. Michael Proctor; Chief Economist, Missouri Public Service Commission Staff

Mr. Ryan Kind; Chief Economist, Office of the Public Counsel

To begin, I need to emphasize that incentive plans are not a new concept in Missouri. The concept of incentive plans first gained wide recognition in the 1980s in the telecommunications industry, and the Missouri Commission reached an agreement with Southwestern Bell Telephone Company in 1990 for into undergo an alternative regulatory experiment, in the form of an incentive sharing plan. That experiment lasted a total of four years, from 1990 to 1993, before expiring. Since then, a number of incentive sharing plans have also been implemented in Missouri for natural gas utilities pertaining specifically to the gas cost portion of customer utility rates.

Meanwhile, in the electric industry, some of our electric utilities entered into a period of healthy earnings in the late 1980s and early 1990s, due to declining rate bases and reduced numbers of employees, among other factors. The regulatory response to this situation by the Missouri Commission Staff was to periodically conduct earnings investigations of these utilities, which in turn generally resulted in negotiated rate reductions and agreements for so-called rate moratoriums for a period of time for these

utilities. Eventually, some of the parties involved in this process began considering whether there might not be alternative means to handle the situation of companies over-earning on a more-or-less continual basis, as measured under traditional regulatory methods. These considerations led to the establishment of the first, and to-date only, electric incentive sharing plan established in Missouri, Ameren Union Electric's Experimental Alternative Regulatory Plan, or EARP.

The EARP was agreed to in 1995, in conjunction with Ameren's agreement to reduce its rates by \$30 million on a permanent basis, and issue one-time rate credits to its Missouri customers also in the amount of \$30 million. The EARP itself called for annual measurement of Ameren's Missouri earnings, with any earnings above pre-set targets to be shared with Ameren's customers in the form of bill credits. The EARP was originally slated for a three-year duration, but was extended another three years as a result of the Missouri Commission's approval of a stipulation and agreement approving Union Electric's merger with Central Illinois Public Service Company in 1997. A further rate reduction was implemented for Ameren UE concurrent with the three-year extension of the incentive plan. The EARP expired in Missouri on June 30, 2001.

The EARP was the subject of occasional regulatory controversy here in Missouri during its course, and its history may also play a part in the arguments regarding the current earnings complaint before the Commission concerning Ameren UE's rate levels. In light of the Commission's ex parte restrictions, and the presence of several Commissioners here today, I hope that everyone here today will avoid the temptation to focus on the past and re-debate these specific issues in this forum and instead focus upon the future and the issues of whether and how, in general terms, the Commission should or should not explore alternative forms of regulating electric utilities within its jurisdiction.

About midway through these proceedings, there will be a break. There will also be an opportunity for audience members to pose questions to some or all of our panel members.

With all that said, I am honored to introduce our keynote speaker:



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# Properly Structured Incentive Plans Electric Roundtable Discussion Group

Held by the Missouri Public Service Commission

December 17, 2001

Jefferson City, Missouri

Kenneth Rose, Ph.D.  
The National Regulatory Research Institute  
Ohio State University



## The Need for Better Incentives

- Widely believed that cost-based regulation does not provide sufficient incentive to minimize operating and investment costs
- Incentive- or performance-based regulation has been considered and used to improve this limitation
- As with any regulatory change, moving toward an incentive approach involves tradeoffs

## Targeted versus Broadbased Incentive Programs

- Empirical evidence suggests that targeted incentives are effective in meeting the intended goal
- However, there may be unintended consequences from focusing on a specific target (nuclear capacity factor, for example)

## Targeted versus Broadbased (*continued*)

- m Broadbased incentives avoid this problem  
But broadbased mechanisms are more difficult to implement and have had limited use with electric utilities

## Efficiency versus Equity

- m A good incentive plan may increase cost efficiency (or technological efficiency, i.e., minimum use of production inputs)
- n with pricing flexibility, it may also result; in price discrimination, in particular, where smaller customers end up paying higher prices relative to larger customers than under cost-based ratemaking

## Efficiency versus Equity (continued)

- m The incentive plans should provide sufficient encouragement for cost minimization, but all customers should benefit as well
- Mutually beneficial incentive plans are also more politically sustainable and will last longer

## Pricing Flexibility versus Gaming

- An incentive plan that is too rigid will not achieve good results
- The regulated firm needs enough flexibility to reallocate its resources to increase cost efficiency
- However, too much latitude will allow the firm to game the incentive mechanism- to its advantage and thwart the hoped for benefits

## Risk versus Reward

Risk and reward should be symmetrical  
Incentive plans will typically increase the risk to the regulated company -- the potential reward should then be greater than relatively lower risk ROR regulation  
Must avoid the asymmetry of "socializing costs and privatizing profits" -- where customers pay the costs and assume the risks, but the company keeps the profits

## Adjustment Period: Infrequent versus Frequent Adjustments

Allowing the incentive plan to work versus frequent adjustments for changing conditions

- Incentives are stronger when there are longer periods between recalibrations
- m The temptation will be to recalibrate when profits begin to look "excessive"

## Profit Sharing versus Incentive Killing

- m Often there is a deadband range where the company keeps all the gains or suffers all the loss
- m Outside that deadband range, there is a sharing of the profit or loss

## **Profit Sharing versus Incentive**

### **Killing (continued)**

- Under a price cap mechanism, de facto profit regulation can arise when there are numerous adjustments to the annual price change

$$\% \text{Price Adj.} = \text{Price Index} - X \pm Z$$

in addition, earnings and service quality adjustments maybe made

- Are incentives being allowed to work, or are profits being regulated again?

## **Quality of Service and Reliability ; versus Cost Efficiencies**

- We are being told that more incentives are needed to encourage investment and sufficient O&M expenditures for transmission and distribution service - i.e., ROR regulation is not good enough

higher rates-of-return are being asked for to increase investment

or specific incentives to encourage investment and O&M expenditures

NRRI/OSU

## Quality of Service and Reliability (*continued*)

- **We are also being told that competitive pressures are causing too little investment and reduction in O&M expenditures on transmission and distribution services**

*utilities* are uncertain about the outcome of *or when* the transition to competition will be completed

cost shifting may also be occurring where efforts are being made to improve generation and competitive position

## Quality of Service and Reliability (*continued*)

- **We also know from experience that price-cap regulation may lead to quality of service loss**  
experience with telecom price caps suggest that, without mitigation, quality of service is reduced
- **Well, which is it? All three concerns are pointing in the same direction -- lower quality of service and reliability -- but all three cannot be true**
- **Are we back to targeted incentives again (and its known limitation of causing unintended consequences)**



## Cross-Subsidization versus Allowing Company Latitude

- Shifting of costs from competitive to regulated part of the company and shifting profits from regulated company to the competitive

Prevented by either

- regulatory firewalls (structural separation or unbundling)
  - required divestiture
  - Both have limitations
- 

## **Price Cap** Incentive/Competition Catch-22

- Price caps are advocated for distribution services -- because it is unlikely to be competitive any time soon
- But price caps work best when there is competitive pressure to lower prices below the capped price
- When there is sufficient competitive pressure --why use a price cap?

## Electric Industry Specific

(,questions

- How should an incentive plan be structured when there is considerable market power in wholesale markets and other services will remain regulated? (Answer: very carefully)
- Limited experience with broadbased incentive programs raises these questions:
  - which services should- they apply to?  
when? what mechanisms?
  - exit strategy needed in case of failure?

5.a



# Properly Structured Incentive Plans

Electric Roundtable Discussion Group

Chris Giles  
December 17, 2001



## Properly Structured Incentive Plans A Balanced Scorecard

### Why Incentive Plans?

- Recognizes exceptional and below average performance
- Encourage Efficient Utility Investments & Operations (Belief that Incentives drive efficiency)
- Reasonable Prices & Price Stability Over Time
- Customer Satisfaction
- Investor Confidence and Shareholder Value
- Further Align Regulatory Interests with Utility Interests
- Reinforce Positive Regulatory Climate (demonstrating the strong working relationship of all stakeholders)
- Reinforce Positive Industry/Government Working Relationship for Business
- Promote Prudent Investment in Infrastructure & Economic Development



## Properly Structured Incentive Plans Address All Stakeholders

### Stakeholders

- Regulators
- Utilities (shareholders)
- Customers
- Public (government, business, residence, industry)
- Consumer Advocates
- Environmentalists
- Welfare Agencies
- Labor

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## Properly Structured Incentive Plans Address Interest of All Stakeholders

INTERESTS	STAKEHOLDERS							
	Regulation	Utility	Consumers	Public	Welfare	Codes	Labor	Environ.
Customer Retention								
Loss Growth								
Reduced Regulation Burden								
Customer Satisfaction	x							
Reliability								
Energy Efficiency	x							
Environmental Improvement								
Stewardship								
Strong Infrastructure	x							
Business Climate	x							
Economic Growth								

Kansas City  
Power & Light  
Company

## Meeting Both Customer & Investor Objectives

### Customer Objectives

- Reasonable prices
- Price equity
- Efficient investments & operations
- Reliability of supply
- Power quality
- Customer satisfaction
- Expanded use of renewables
- Enforce laws
- Stable prices

### Investor Objectives

- Provide safe, reliable service at reasonable prices
- Grow customer base
- Satisfy Customers
- Control costs
- Receive benefits from improvement
- Maximize benefits of investment
- Social stewardship
- Stable Prices
- Safety of Employees



## Properly Structured Incentive Plans Offer:

- Incentive for Improvement
  - Productivity
  - Reduced Cost
  - Increased Innovation
- Differentiation for Customers
- Utility - Opportunity to Effectively Manage Risk
  - Time
  - Flexibility
  - Utility Held Accountable for Risk Management
  - To Do It Right
- Additional Opportunity for Social Stewardship



## Forms of Incentive Regulation

- Earnings sharing
- Rate reductions/rate freezes
- "Zones of reasonableness"
- Price caps/revenue caps
- Service quality mechanism
- New product & service offerings



## Properly Structured Incentive Plans

- Needs to Balance where Everyone Shares in Gains and Losses
- Address all Constituencies
  - Utility -+ Rewards for Improvement
  - Environment -+ Stewardship (green energy, DSM measures, weatherization)
  - Social -+ Beyond laws (weatherization, low-income assistance, economic well-being)
  - Labor -+ Economic Development
  - Public -+ Strengthened Infrastructure, Economic Vitality
  - Consumers --> Price Stability, with Potential Rewards
  - Consumer Advocates -+ All of the Above





## Key Success Factors

Believe It

Trust

Balance

Symmetry

Utility Needs to Deliver Results

D=ML



5.b

Ili

## **Ameren**

### **Properly Structured Incentive Plans: AmerenUE's Perspective**

Warner L. Baxter  
Professor Dennis L. Weisman

Electric Roundtable Discussion Group  
Jefferson City  
December 17, 2001

### **Objectives of Economic Regulation**

- Q Emulate competitive market outcome where competition doesn't work or is insufficient
- Q Promote efficiency
- Q Rate stability, service quality, universal service
- C| Facilitate timely infrastructure investments
- O Incentive regulation can achieve these objectives.

## Objectives of Incentive Regulation

- 0 Stronger incentives, enhanced efficiency
- 0 Improved rate stability and rate flexibility
- 0 Streamlined regulatory process
- 0 More effective in regulating increasingly complex and rapidly changing industry
- 0 Timely customer participation in success of company
- 0 Create win-win proposition for all stakeholders

## Experience: Telecommunications

- 0 Widely adopted:
  - 48 States in little more than a decade
  - Evolution: Moratoria 0 Sharing 0 Price Caps
  - 5+ year plan duration
- 0 Performance confirms incentive regulation works
  - Lower rates, higher earnings compared to Cost of Service regulation
  - Increased network modernization; improved universal service coverage
- 0 Return to cost-of-service uncommon

## Experience: Electric Power

- 0 28 utilities in 16 states; widely used abroad
- Q Rate-case moratoria and price caps plans
- 2175% of all plans have earnings sharing
- Q Evolution of incentive plans similar to telecom
- Q Used both in states with regulated and competitive retail services
- Q Results are well received to date

## Attributes of Well-designed Plans

- 0 Transparent, easy to understand
- 0 Broad-based performance benchmarks (e.g., rates)
- 0 Strong regulatory commitment
- Q Clearly-defined monitoring provisions
- Q Sharing of gains: prices and earnings
- Q Accommodate industry and economic developments

### *Pitfalls to Avoid*

#### Q Insufficient or inappropriate incentives

- Unbalanced sharing of benefits
- Narrowly-targeted plans, revenue caps or revenue-per-customer caps (instead of price caps)

#### O Plans that allow *for* operationally or politically unacceptable prices or earnings

#### 2 Weak commitment to agreed-upon plan

## Overview of AmerenUE's EARP

#### H Two three-year plans: 1995-98 and 1998-2001

#### H Up-front rate reductions and one-time sharing credit

##### Annual earnings sharing credits:

- 12.6% to 14% ROE - 50/50 sharing
- 14% to 16% ROE - 90 percent to customers
- above 16% ROE - 100 percent to customers

#### Q Effective ROE cap of 13.5%

#### O Monitoring provisions

## MO Electric Incentive Regulation Works

Q More than \$425 million in rate reductions and sharing credits to customers

Low effective rates for customers:

- Effective rates have decreased faster than for average Midwestern utility
- St. Louis now enjoys some of the lowest rates of any major metro area in the country

O Rate stability

## MO Electric Incentive Regulation Works

a Stronger incentives to improve performance

B Sharing credits and up-front rate reductions resulted in more timely customer participation in improved performance

O Lower regulatory costs

O Adjusted to changing market and economic conditions

## MO Electric Incentive Regulation Works

Q Investment in infrastructure could be made on a timely basis

B Maintained high service quality and customer satisfaction

Q Financially-healthy company with low rates and low costs

## Looking Ahead

B Incentive regulation is the appropriate regulatory model for the future

e No easy, one-size-fits-all-utilities solution

a MO electric incentive regulation can evolve on a case-by-case basis

5.0





# Performance Based Incentives for Electric Utilities

Presented by  
Michael S. Proctor  
Chief Economist, MoPSC

Electric Roundtable  
December 17, 2001

**Two expressions are typically used to describe this topic:**

**PERFORMANCE BASED RATEMAKING (PBR)**

**INCENTIVE REGULATION (IR)**

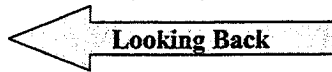
**The title of this presentation combines these two simply to note that incentives should be directly linked to performance.**

**In the October 2001 issue of The Electricity Journal, it is reported that: "At least 28 electric utilities in 16 states currently operate or have recently operated under some form of broad-based PBR." Included in this list for the state of Missouri is AmerenUE with what is characterized as "Rate freeze with earnings sharing."**

- 1. The first phase (1995-1998) was part of an experimental alternative regulation plan (EARP) for Union Electric.**
- 2. This experiment was extended to a second phase (1998-2001) as away to allow Ameren to recover a portion of its merger savings when Union Electric merged with Central Illinois Public Service.**

## Regulatory Perspectives

- Cost Based Regulation (CBR)
  - Historical Test-Year Adjusted (Normalized) Costs  
s.t. Prudency Adjustments



- Performance Based Incentives (PBI)
  - Future Actual Costs  
s.t. Benchmarks  
! Looking Forward

### COST-BASED REGULATION

"Test year" is the heart of cost-based regulation.

Costs incurred within the test year that are not normal are adjusted.

Prudency adjustments are in addition to normalization adjustments, and are made for poor historical performance by utility management.

### PERFORMANCE-BASED INCENTIVES

Actual costs are subject to all of the factors that can make any specific period of time not normal; e.g., weather, general economic conditions, one-time large expenditures.

An example of a benchmark is actual cost at a point in time, indexed over time by a specific escalation factor.

# Prudency Adjustments

- Investment Decisions

- Historical analysis of decisions applied after the decision is made.

- Expenses

- Historical analysis of necessity of an expenditure after it is made.

## **BIG QUESTION**

**What is the criteria for prudency?**

Prudency reviews with respect to rate base items typically occur when large additions are made to rate base. Prudency audits will typically include review of documentation w.r.t. to the decision making process followed by the utility.

Prudency reviews of expense items will look for costs that are out of line with historical expenditures by the utility.

Most expense items are simply adjusted to reflect normal operations. These are not normally considered prudency adjustments.

## Is the answer      Benchmarks?

- A *Benchmark* is a standard from which to measure deviations.
  - >E.G. from Accounting - Prime Cost Variance  
Price Variance & Quantity Variance

$$PV = AQ(AP - SP) \quad \mathbf{J}$$

**SP = Standard Price**

$$QV = AP(AQ - SQ)$$

**SQ = Standard Quantity**

The purpose of variance analysis is to determine if expenditures on either a capital project or expense item are exceeding expectations. In this context, the "standards" represent the expectations of someone with respect to the project or expenses.

$TV = PV + QV$  (Total Variance is the sum of price and quantity variance)

When TV exceeds a limit, management is automatically "red-flagged" and would then take whatever actions are necessary to get the project back in line with expectations, or perhaps revise expectations.

## **What makes PBI attractive?**

- PBI standards are made explicit and this provides regulatory certainty.
- PBI can result in not only reduced costs but lower rates for customers.
- PBI can be a win-win situation and how much of the winnings goes to shareholders vs. ratepayers is explicit.

*The State of Performance-Based Regulation in the U.S. Electric Utility Industry*, by Johannes Pfeifenberger, Philip Hanser and Gregory Basheda (Brattle Group in Cambridge Massachusetts), *The Electricity Journal*, October 2001, pages 71-79.

The authors list the follow as "five distinct advantages" of PBR over COSR:

1. By not linking authorized revenues directly to realized operating costs, PBR plans can provide companies with strong incentives to control costs and increase other aspects of performance.
2. PBR can provide improved rate predictability for customers, especially through plans like rate freezes and rate case moratoria.
3. PBR plans, such as earnings sharing plans, can secure timely customer participation in a company's improved financial performance, thereby making customers "stakeholders" in the company's operations.
4. PBR plans can reduce administrative and regulatory costs by avoiding regulatory micro-management of a company's operations and by reducing the number of litigated rate cases.
5. By providing an electric utility with incentives similar to those faced by firms in competitive markets, well structured PBR plans can serve both as a tool to regulate traditional utility operations and as a transitional mechanism to restructured, more competitive electricity markets.

# What makes PBI hard?

- Prudency Standards are **STATIC**
  - relative to a specific point in time.



- PBI Standards are **DYNAMIC**
  - must apply over a specified time period.

Time

"Static" is like taking a still picture with a 35 mm camera.

"Dynamic" is like shooting a movie with a camcorder.

Prudency standards tend to focus on the decision making or management process. Because processes can become quite complex, it can be difficult to implement a good review process for determining prudency.

PBI standards tend to focus on results rather than standards. The results are a product of both the decision process and the outcomes of events that are uncertain at the time decisions are made. Thus, PBI standards explicitly apply risk sharing between the shareholder and ratepayer.

## **How About An Application!**

- **Fuel Expense via Coal Contracts**
  - J Basic Resource Rent - Fixed**
  - v' Removal Costs - Indexed by components**
  - v' Shipping Costs - Negotiated**
- **Fuel Expense via Natural Gas Purchases**
  - 7' Basic Resource Rent/Cost - Market Price**
  - Storage Costs - Regulated Rates**
  - Transportation Costs - Regulated Rates**

**Fuel expense is one of the largest expense items for electric utilities. It can also be one of the most volatile expense items, especially if the utility is significantly dependent on as a fuel whose price is volatile (e.g., natural gas).**

**In economics, the word "rent" refers to the value that society places on a basic (natural) resource. This is different from "cost," which is a valued-added concept that is related to what is paid for factors of production (capital and labor) used to produce a good or service.**

## What About Fuel Adjustment Clauses?

" They represented a pass through of costs and therefore removed any incentive for the utility to minimize those costs.

In Missouri, for a period of time after the removal of fuel adjustment clauses by the State Supreme court, we used a forecasted fuel procedure for which there was a true-up period 6 months after rates went into effect.

**Fuel Adjustment Clauses for electric utilities were determined to be single issue ratemaking and unlawful in the state of Missouri.**

**For a period of time after the Missouri Supreme Court determined that fuel adjustment clauses were unlawful, the utilities were experiencing significant inflation in their fuel costs. The Commission addressed this issue by allowing the electric utilities to forecast their fuel prices to 6 months after the operation of law date for rates to go into effect. Subsequent to this 6 month period, forecasted prices were trued up to actual prices. If actual prices were lower than the forecast, rates were lowered and customers received a refund. If actual prices were higher than the forecast, there was no change.**



## **Can Fuel Adjustment Clauses Come Under PBI?**

- Probably not without new state legislation.
- Workshops to Determine:
  - Dynamic benchmarks
    - How to factor in market movements?
    - How to factor in fuel type and fuel mix?
    - How to factor in off-system purchases and sales?
    - How to factor in weather?
  - fr' Distinct Price and Quantity Standards
  - fr° Measure Both Price and Quantity Variances

Indexing fuel expense by fuel type is likely to provide the best systematic approach to benchmarking prices for setting price standards.

Quantity standards are more difficult in that weather impacts load which in turn impacts the generation plants that are scheduled and dispatched to meet the load.

Off-system purchases are currently modeled by Staff in production cost models used to normalize test-year fuel and purchased power expense. As transparent wholesale markets develop, it is not clear why incentives for sales and purchases into these markets are needed.

On the other hand, contract sales and purchases are longer term in nature and involve marketing and negotiation skills. But because each contract is unique with respect to terms and conditions, it is not clear how to set standards.

## Can Additions to Rate Base Come Under PBI?

- Probably not an automatic type of PBI that doesn't require a rate case.

### Major Problem with Rate Base

Declining Rate Base => PBI O for Utility

Increasing Rate Base => PBI ® for Utility

- PBI may provide a possible basis for dealing with construction cost overruns.

Revealed Expectations (REx) Incentives are incentive options structured to reveal the expectations of the utility. With respect to capital expenditures, REx incentives appear to provide an attractive alternative for regulators. The following table is an example:

Realized cons After Project completed	Incentives - Payed After Project Completed Incentive Options - Chosen Before Project Starts				
	A	B	C	D	E
\$50	\$17.0	\$15.5	\$13.0	\$9.5	\$5.0
\$60	\$12.0	\$11.5	\$10.0	\$7.5	\$4.0
\$70	\$7.0	\$7.5	\$7.0	\$5.5	\$3.0
\$80	\$2.0	\$3.5	\$4.0	\$3.5	\$2.0
\$90	-\$3.0	-\$0.5	\$1.0	\$1.5	\$1.0
\$100	-\$8.0	-\$4.5	-\$2.0	-\$0.5	\$0.0
\$110	-\$13.0	-\$8.5	-\$5.0	-\$2.5	-\$1.0

*REx Incentives. PBR Choices that Reflect Firms' Performance Expectations*

by Johannes P. Pfeifenger, Paul R. Carpenter and Paul C. Liu  
The Electricity Journal, November 2001

# **What About Customer Services?**

## **Easy Stuff First**

✓ Benchmark on current costs.

Index these costs with appropriate escalators adjusted for productivity increases.

✗ Indexed costs become a revenue requirement cap.

Share savings when utility beats the index.

## **Hard Stuff Next**

✓ Establish Quality of Service Standards for each type of customer service.

Establish penalties for sub-standard customer service.

It is assumed that specific expense areas can directly be associated with specific customer services.

For example, maintenance expenses on distribution lines, poles and transformers can have a major impact on how frequently the distribution system experiences failures, resulting in customer service being shut down for a period of time. However, there is the other side of this question of service, that is how quickly service is restored when there is a shut down.

Another example is the accuracy of a customer's bill. Utilities pay meter readers to accurately record customer usage. Many of these systems are now being converted to automatic type of meter reading. Utilities also train customer representatives to deal with customer complaints that are usually focused on what the customer perceives as an inaccurate bill.

## **Got A Plan in Mind?**

**O Start with the largest/hardest items of cost.**

**Rate Base: Generation**

**Expenses: Fuel Costs**

**Customer Services: Quality Standards**

**20 Set up workshops to address these items.**

**00 Identify protocols for implementation.**

**® Legislation needed before implementation.**

**Consensus Recommendations**

**While it is important to start with the largest and perhaps most difficult items of cost, it is also important that all items of cost are looked at for possible inclusion in PBI.**

**A critical element not listed above is the time period over which a PBI plan is implemented. The question is really how often should the PBI plan be revisited?**

**Workshops take a commitment of time and resources, but provide a good forum for communication.**

**What makes consensus difficult is various parties not willing to give on certain positions in a negotiated approach. Without substantial agreement by stakeholders, it is doubtful that legislation needed for PBI will go forward.**

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# Consumer Views on Incentive Regulation for Electric Utilities

Missouri PSC Electric Roundtable  
December 17, 2001

Ryan Kind - Chief Energy Economist  
Missouri Office of the Public Counsel

## Topics Covered

Consumer needs and expectations for  
services provided by regulated utilities

- Incentives inherent in traditional regulation
- Is incentive regulation a solution in search of a problem or does it address unmet needs?
- Risks to consumers from incentive regulation
- Incentive design considerations

## What do consumers expect from regulated electric utilities?

- Safe and adequate service at reasonable rates.
- In the case of electric utilities, this means that consumers want lights and appliances to go on when they flip the switch.

They want to pay a bill based on actual costs, not a bill that's inflated by the ability of an unregulated monopolist to set their own price.

## What do consumers NOT expect from, regulated electric utilities?

- Unreliable electric service.
- Poor customer service.
- High and volatile rates that are due to inefficient operations, poor planning, inadequate regulation, or dysfunctional wholesale power markets.

## What kind of rates and service have consumers received from Missouri electric utilities?

Electric rates are below the national average and consumers are not being gouged by monopoly providers.

Electric service in Missouri has been very reliable unlike other parts of the country.

With a few exceptions, customer service has been acceptable.

## Are there opportunities for improving utility performance?

- Of course, opportunities usually exist.
- Overall, traditional regulation has served Missouri consumers well and continues to do so.



## Can incentive regulation help ensure consumers get the service and rates they expect?

- Before answering this question, must acknowledge that traditional rate of return (ROR) regulation **already** provides incentives.
- Must also acknowledge that the movement towards competition in the electric industry that occurred throughout the 1990s gave **utilities** a strong incentive to enhance both their efficiency and some aspects of customer service.

## Here's what one MO utility told its shareholders in 1994 about its efforts to prepare for competition

"Foreseeing change, [we] began to prepare for new competition in 1988 when **We** launched a reorganization and job-reduction program. Accompanied by a renewed emphasis on cost control, the changes we started in 1988 are working..."

## Comparing incentives for gas and electric utilities in ROR regulation

Regulatory lag is a more potent incentive for electric utilities due to longer lags.

Incentives are different for gas and electric because different cost structures lead to different frequency of rate/complaint cases.

Gas utilities deal with supply costs outside of rate cases in PGA cases.

Major gas utilities file cases every 2 or 3 years.

## Gas vs electric ROR incentives (cont.)

Most Missouri electric utilities made large investments 20 to 30 years ago in baseload coal/nuclear plants.

Depreciation of these plants leads to lower book value of rate base per unit of output.

Less rate base means less return on rate base and ultimately a lower revenue requirement per unit of output.

- Increased lag between electric rate cases leads to increased incentive for cutting costs.

## Re-phrasing the question

Can adding to Or altering the incentives already (1) present in traditional rate of return regulation and (2) present due to the anticipation of greater retail and wholesale competition help ensure - consumers get the service, and rates they expect?

### Public Counsel is skeptical about potential benefits of incentive regulation for MO electric utilities

- Most electric utilities in Missouri have already undergone at least one round of re-engineering to increase efficiency and improve performance. Most of these improvement efforts were in response to: (1) incentives from traditional regulation or (2) the anticipation of increased retail- and wholesale competition.
- Benchmarking performance and incentive comp. plans are already prevalent in MO.

## **Basis for Public Counsel skepticism regarding incentives (continued)**

**Traditional regulation continues to bring reasonable rates and adequate service.**

**For consumers, there is generally not a problem that needs to be addressed.**

**Many utilities favored incentives during the stock market boom of the 1990s when they saw high tech and power marketing firms become the darlings of Wall Street.**

## **Risks to consumers of departing from traditional ROR regulation**

**Cost to consumers for providing incentives may lead to rates higher than under traditional rate of return regulation. (e.g. if a utility is allowed to retain an additional \$40 million in earnings while costs are only reduced by \$20 million.)**

**No empirical evidence to show that states in Missouri's position are likely to benefit from incentive regulation for electric utilities.**

## Risks to consumers (continued)

- Utilities may be seeking incentives from the legislature that would duplicate those requested from the Commission. Consumers could pay as both ratepayers and taxpayers for improved performance.
- Still need strong regulatory oversight of the utility planning process to ensure that consumer needs for reliable service are met.

## Considerations in the design of specific incentive plans

- Need to assess what incentives are appropriate for a specific utility at a specific point in time.

For example, if a utility has undertaken cost cutting initiatives over an extended period of time, then must be careful: that incentives to cut costs further don't cause unacceptable harm to service quality. Penalties for unacceptable performance may be needed to protect consumers.

## Design considerations (continued)

What outcomes are you trying to achieve:

Is the focus on cutting costs wherever the utility finds opportunities or do you want to steer efforts towards improving call response rates, distribution reliability, heat rates or generation unit availability?

Are incentives intended to encourage conservation efforts or investments in renewable resources? If so, are incentives preferable to mandates for achieving outcomes

## Design considerations (continued)

The appropriate incentive framework depends on the objectives that are set.

Incentives should generally be symmetrical so that improved performance leads to increased earnings but degradation of performance leads to decreased earnings.

Must re-base rates based on current costs prior to the start of an incentive plan.

## Design considerations (continued)

- Framework should be clear so consumers aren't harmed by litigation delays.

Provisions should be made to provide ~~interim, subject to refund,~~ sharing of savings with customers if litigation delays occur.

Some minimal level of trust between a utility and its regulators is a necessary prerequisite.

## Types of incentive regulation

Cost of service or rate of return regulation

Rate of return with specified moratorium period

Price cap regulation

- Return-based sharing plans
- Yardstick regulation
- Performance-based regulation (PBR)

Franchise competition

## Summary

Decision to implement new forms of incentive regulation must be based on tangible evidence that consumers are likely to benefit.

The assessment of likely benefits for consumers must consider the specific circumstances including: (1) clarity of the proposal and ease of implementation, (2) the need, if any, for incentives above and beyond those already present and (3) the likelihood that the proposal will create net benefits that justify the cost of incentives.



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# MOPSC

## Natural Gas Roundtable

### Properly Structured Incentive Plans

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